

**TITLE**  
**THICK FILM DIELECTRIC COMPOSITIONS FOR USE  
ON ALUMINUM NITRIDE SUBSTRATES**

**ABSTRACT**

5           The present invention relates to a Cd-free and Pb-free glass  
composition comprising, based in mol%, 1-10% MO where M is selected  
from Ba, Sr, Ca and mixtures thereof, 5-30% MgO, 0.3-5% CuO, 0-2.5%  
P<sub>2</sub>O<sub>5</sub>, 0-2.5% ZrO<sub>2</sub>, 24-45% ZnO, 2-10% Al<sub>2</sub>O<sub>3</sub>, 35-50% SiO<sub>2</sub> and 0.1-3%  
10       A<sub>2</sub>O where A is selected from the group of alkali elements and mixtures  
thereof wherein the glass composition is useful in thick paste dielectric  
materials which are compatible with AlN substrates.